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Application Number	10/566,073
Filing Date	January 26, 2006
First Named Inventor	Strano et al.
Art Unit	unknown
Examiner Name	unknown
Attorney Docket Number	11321-P071WOUS

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PTO/SB/08B (04-07)

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/J.L./	1	Iijima, "Helical microtubules of graphitic carbon," Nature 1991, 354:56		
/J.L./	2	Iijima et al, "Single-shell carbon nanotubes of 1-nm diameter," Nature 1993, 363:603		
/J.L./	3	Bethune et al, "Cobalt-catalysed growth of carbon nanotubes with single-atomic-layer walls," Nature 1993, 363:605		
/J.L./	4	Baughman et al, "Carbon Nanotubes – the Route Toward Applications," Science 2002, 297:787-792		
/J.L./	5	O'Connell et al, "Band Gap Fluorescence from Individual Single-Walled Carbon Nanotubes," Science 2002, 297:593		
/J.L./	6	Avouris, "Molecular Electronics with Carbon Nanotubes," Acc. Chem. Res. 2002, 35:1026-1034		
/J.L./	7	Bronikowski et al, "Gas-phase production of carbon single-walled nanotubes from carbon monoxide via the HiPco process: A parametric study," Journal of Vacuum Science & Technology 2001, 19:1800-1805		
/J.L./	8	Strano et al, "The Role of Surfactant Adsorption during Ultrasonication in the Dispersion of Single-Walled Carbon Nanotubes," J. Nanosci. and Nanotech. 2003, 3:81		
/J.L./	9	Bachilo et al, "Structure-Assigned Optical Spectra of Single-Walled Carbon Nanotubes," Science 2002, 298:2361		
/J.L./	10	Thess et al, "Crystalline Ropes of Metallic Carbon Nanotubes," Science 1996, 273:483-487		

Examiner Signature	/Jun Li/	Date Considered	10/14/2008
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/J.L./	11	Chen et al, "Solution Properties of Single-Walled Carbon Nanotubes," Science 1998, 282:95-98	
/J.L./	12	Ebbesen, "Carbon Nanotubes," Annu. Rev. Mater. Sci. 1994, 24:235-264	
/J.L./	13	Vander Wal et al, "Flame synthesis of Fe catalyzed single-walled carbon nanotubes and Ni catalyzed nanofibers: growth mechanisms and consequences," Chem. Phys. Lett. 2001, 349:178-184	
/J.L./	14	Hafner et al, "Catalytic growth of single-wall carbon nanotubes from metal particles," Chem. Phys. Lett. 1998, 296:195-202	
/J.L./	15	Cheng et al, "Bulk morphology and diameter distribution of single-walled carbon nanotubes synthesized by catalytic decomposition of hydrocarbons," Chem. Phys. Lett. 1998, 289:602-610	
/J.L./	16	Nikolaev et al, "Gas-phase catalytic growth of single-walled carbon nanotubes from carbon monoxide," Chem. Phys. Lett. 1999, 313:91-97	
/J.L./	17	Chiang et al, "Purification and Characterization of Single-Wall Carbon Nanotubes," J. Phys. Chem. B 2001, 105:1157-1161	
/J.L./	18	Chiang et al, "Purification and Characterization of Single-Wall Carbon Nanotubes (SWNTs) Obtained from the Gas-Phase Decomposition of CO (HiPco Process)," J. Phys. Chem. B 2001, 105:8297-8301	
/J.L./	19	Liu et al, "Fullerene Pipes," Science 1998, 280:1253-1256	
/J.L./	20	Gu et al, "Cutting Single-Wall Carbon Nanotubes through Fluorination," Nano Lett. 2002, 2(9):1009-1013	

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/J.L./	22	Bahr et al, "Covalent chemistry of single-wall carbon nanotubes," J. Mat. Chem. 2002, 12:1952-1958	
/J.L./	23	Dyke et al, "Solvent-Free Functionalization of Carbon Nanotubes," J. Am. Chem. Soc. 2003, 125:1156	
/J.L./	24	Bahr et al, "Functionalization of Carbon Nanotubes by Electrochemical Reduction of Aryl Diazonium Salts: A Bucky Paper Electrode," J. Am. Chem. Soc. 2001, 123:6536-6542	
/J.L./	25	Dyke et al, "Unbundled and Highly Functionalized Carbon Nanotubes from Aqueous Reactions," Nano Lett. 2003, 3:1215-1218	
/J.L./	26	Dyke et al, "Diazonium-Based Functionalization of Carbon Nanotubes: XPS and GC-MS Analysis and Mechanistic Implications," Synthetic Lett. 2004, 155-160	
/J.L./	27	Strano et al, "Electronic Structure Control of Single-Walled Carbon Nanotube Functionalization," Science 2003, 301:1519	
/J.L./	28	Niyogi et al, "Chemistry of Single-Walled Carbon Nanotubes," Acc. of Chem. Res. 2002, 35:1105-1113	
/J.L./	29	Itkis et al, "Spectroscopic Study of the Fermi Level Electronic Structure of Single-Walled Carbon Nanotubes," Nanoletters 2002, 2:155-159	
/J.L./	30	Chattopadhyay et al, "A Route for Bulk Separation of Semiconducting from Metallic Single-Wall Carbon Nanotubes," J. Am. Chem. Soc. 2003, 125:3370-3375	

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/J.L./	32	Doom et al, "Capillary Electrophoresis Separations of Bundled and Individual Carbon Nanotubes," J. Phys. Chem. B 2003, 107,6063-6069	
/J.L./	33	Dresselhaus et al, "Science of Fullerenes and Carbon Nanotubes," Academic Press, San Diego, 1996	
/J.L./	34	Saito et al, "Physical Properties of Carbon Nanotubes," Imperial College Press, London, 1998	
/J.L./	35	Strano et al, "Assignment of (n, m) Raman and Optical Features of Metallic Single-Walled Carbon Nanotubes," Nanoletter 2003, 3: 1091-1096	
/J.L./	36	Reich et al, "Chirality dependence of the density-of-states singularities in Carbon Nanotubes," American Physical Society, 62: 4273-4276	
/J.L./	37	Strano et al, "Reversible, Band-Gap-Selective Protonation of Single-Walled Carbon Nanotubes in Solution,"	

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